CLAIMS:

1. A conductive connection forming method comprising:

forming a first layer comprising a first metal on a substrate;

transforming at least a part of the first layer to a transformed material comprising the first metal and a second substance different from the first metal; and

forming a conductive connection to the first layer by way of the transformed material.

2. The method of claim 1 wherein the transforming comprises ion implanting nitrogen into the first layer and wherein the transformed material is less susceptible to formation of an oxide compared to the first metal.

3. The method of claim 1 further comprising forming a second layer comprising a second metal different from the first metal on the first layer, wherein the transformed material comprises an alloy material comprising the first and second metals.

4. The method of claim 3 wherein the alloy material consists essentially of an intermetallic material.

5. The method of claim 3 wherein the alloy material is less susceptible to formation of metal oxide compared to the first metal.

6. The method of claim 3 wherein the transforming comprises annealing the first and second layer.

7. The method of claim 3 further comprising removing substantially all of any second metal not comprised by the alloy material.

8. The method of claim 3 wherein the first layer has a thickness before the forming the alloy material, further comprising removing any second metal not comprised by the alloy material, and any portion of the alloy material, beyond the thickness.

9. The method of claim 8 wherein the removing comprises chemical mechanical polishing.

10. The method of claim 3 further comprising removing at least some of any second metal not comprised by the alloy material and leaving a sufficient thickness of alloy material to reduce oxidation of the first layer.

11. The method of claim 10 wherein the removing comprises etching with an acid comprising HCl, HF, H_2SO_4, HNO_3, or a combination thereof.

12. The method of claim 10 wherein a rate of removing the second layer compared to the alloy material comprises greater than 5 to 1.

13. The method of claim 3 wherein the first layer comprises copper.

14. The method of claim 3 wherein the alloy material consists essentially of the first and second metals.

15. The method of claim 3 wherein the second layer comprises aluminum, titanium, palladium, magnesium, or two or more such metals.

16. The method of claim 3 wherein the second layer has a thickness of about 150 to about 800 Angstroms.

17. The method of claim 3 wherein about 50 to about 300 Angstroms of the first layer is transformed to the alloy material.

18. The method of claim 3 wherein the conductive connection comprises an integrated circuit via or an integrated circuit wire bond.

19. A conductive connection forming method comprising:

forming a first layer comprising copper over a substrate;

forming a second layer comprising a second metal different from copper over the first layer;

incorporating at least some of the second metal into an alloy layer comprising the second metal and copper;

removing at least a portion of any second metal that is not incorporated into the alloy layer and exposing the alloy layer; and

forming a conductive connection to the alloy layer.

20. The method of claim 19 wherein the alloy layer consists essentially of an intermetal.

21. The method of claim 19 wherein the incorporating comprises annealing the first and second layer.

22. The method of claim 19 wherein the first layer has a thickness before the incorporating, further comprising removing any second metal not comprised by the alloy layer, and any portion of the alloy layer, beyond the thickness.

23. The method of claim 22 wherein the removing comprises chemical mechanical polishing.

24. The method of claim 19 wherein the removing comprises etching with an acid comprising HCl, HF, H_2SO_4, HNO_3, or a combination thereof.

25. The method of claim 19 wherein a rate of removing the second layer compared to the alloy material comprises greater than 5 to 1.

26. The method of claim 19 wherein the second layer comprises aluminum, titanium, palladium, magnesium, or two or more such metals.

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27. An oxidation reducing method comprising:

contacting a layer comprising a first metal with a second metal different from the first metal;

treating the layer in contact with the second metal and forming an intermetallic material at least partially within the layer, the intermetallic material comprising the first and second metals;

removing substantially all of any residual second metal not comprised by the intermetallic material from over the intermetallic material; and

forming a conductive connection to the intermetallic material without forming a substantial amount of metal oxide on the first metal.

28. The method of claim 27 wherein the treating comprises annealing the layer when in contact with the second metal.

29. The method of claim 27 wherein the layer has a thickness before the forming the intermetallic material, further comprising removing any portion of the intermetallic material beyond the thickness.

30. The method of claim 27 wherein the layer consists essentially of copper.

31. The method of claim 27 wherein the second metal consists essentially of aluminum, titanium, palladium, magnesium, or two or more such metals.

32. An oxidation protection method for metal-containing material during semiconductor processing, comprising:

forming a first metal-containing material over a substrate;

forming a second metal-containing material over the first metal-containing material;

annealing the first and second metal-containing materials to form an intermetal material from some of the first material and at least some of the second material;

after the annealing, exposing the intermetal material to conditions effective to oxidize the first metal-containing material but the intermetal material protecting at least some of the first metal-containing material from oxidation during the exposing.

33. The method of claim 32 wherein the first metal-containing material consists essentially of copper.

34. The method of claim 32 wherein the second metal-containing material consists essentially of aluminum, titanium, palladium, magnesium, or two or more such metals.

35. An integrated circuit via forming method comprising:

forming a first level of integrated circuit wiring over a semiconductive substrate, the first wiring level comprising a first metal;

forming an intermetallic material at least partially within the first wiring level, the intermetallic material comprising the first metal and a second metal different from the first metal; and

forming a conductive via in electrical contact with the intermetallic material.

36. The method of claim 35 wherein the conductive via is on the intermetallic material.

37. The method of claim 35 wherein the forming the intermetallic material comprises:

forming a layer comprising the second metal on the first wiring level;

annealing the layer and first wiring level; and

removing at least some of any second metal not comprised by the intermetallic material and leaving a sufficient thickness of intermetallic material to reduce oxidation of the first wiring level where the via connects to the first wiring level.

38. The method of claim 35 wherein the forming the conductive via further comprises forming a second level of integrated circuit wiring over the first wiring level during formation of the conductive via.

39. The method of claim 35 wherein the first level comprises copper.

40. The method of claim 35 wherein the second metal comprises aluminum, titanium, palladium, magnesium, or two or more such metals.

41. An integrated circuit wire bond forming method comprising:

forming integrated circuit wiring and defining a bond pad in the wiring comprising a first metal;

forming an intermetallic material at least partially within the bond pad, the intermetallic material comprising the first metal and a second metal different from the first metal; and

forming a wire bond in electrical contact with the intermetallic material.

42. The method of claim 41 wherein the wire bond is on the intermetallic material.

43. The method of claim 41 wherein the forming the intermetallic material comprises:

forming a layer comprising the second metal on the bond pad;

annealing the layer and bond pad; and

removing at least some of any second metal not comprised by the intermetallic material and leaving a sufficient thickness of intermetallic material to reduce oxidation of the bond pad where the wire bond connects to the bond pad.

44. The method of claim 41 wherein, after the defining, the bond pad is topographically below immediately surrounding structures.

45. The method of claim 41 wherein the bond pad and the wire bond comprise copper.

46. The method of claim 41 wherein the second metal comprises aluminum, titanium, palladium, magnesium, or two or more such metals.

47. An integrated circuit comprising:

a semiconductive substrate;

a layer comprising a first metal over the substrate;

a layer of alloy material within the first metal comprising layer, the alloy material layer comprising the first metal and a second metal different from the first metal; and

a conductive connection on the alloy layer.

48. The integrated circuit of claim 47 wherein the alloy material consists essentially of an intermetallic.

49. The integrated circuit of claim 47 wherein the alloy material is less susceptible to formation of metal oxide compared to the first metal.

50. The integrated circuit of claim 47 wherein the first metal comprises copper.

51. The integrated circuit of claim 47 wherein the alloy material consists essentially of the first and second metals.

52. The integrated circuit of claim 47 wherein the second metal comprises aluminum, titanium, palladium, magnesium, or two or more such metals.

53. The integrated circuit of claim 47 wherein about 50 to about 300 Angstroms of the first metal layer is alloy material.

54. The integrated circuit of claim 47 wherein the conductive connection comprises an integrated circuit via or an integrated circuit wire bond.